

CLAIMS

1. A set top box comprising:
 - a) a signal input interface which receives a TV plaza information signal as well as a broadcast signal;
 - b) a DEMUX which classifies and separates the TV Plaza information signal from the broadcast signal;
 - c) a signal output interface connected to a user's TV, which decodes the TV plaza information signal as well as the broadcast signal and transmits the decoded signals to the user's TV;
 - d) a microprocessor which generates a command to control the set top box; and,
 - e) a storage device which stores the TV plaza information signal,wherein the TV plaza information signal is firstly stored into the storage device independently of a user's request and the previously stored TV plaza information is transmitted under control of the microprocessor to the user's TV through the DEMUX and the signal output interface in response to the user's request.
2. The set top box as set forth in claim 1, wherein the signal input interface comprises a tuner which receives the TV plaza information signal as well as the broadcast signal and a channel decoder which extracts a user-requested channel from the received broadcast signal under control of a microprocessor.
3. The set top box as set forth in claim 1, wherein the signal output interface comprises at least one decoder selected from the group consisting of a data decoder, a video decoder and an audio decoder.
4. The set top box as set forth in claim 1, wherein the TV plaza information signal is a digitally encoded information signal, and the TV plaza information is life information including advertisement information, education information, stock information and weather information.

5. The set top box as set forth in claim 3, wherein the TV plaza information signal is a composite signal selected from the group consisting of a data signal, a video signal and an audio signal, and the DEMUX separates the composite signal and transmits the separated signals to the corresponding decoders.
6. The set top box as set forth in claim 1, further comprising a cryptographic module.
7. The set top box as set forth in claim 1, further comprising a software module to send a return path message to a server managed by a TV plaza operator, when the TV plaza information is safely received and stored into the storage device.
8. A method for providing TV plaza function to a set top box, comprising:
 - i) providing a set top box composed of: a) a signal input interface which receives a TV plaza information signal as well as a broadcast signal; b) a DEMUX which classifies and separates the TV Plaza information signal from the broadcast signal; c) a signal output interface connected to a user's TV, which decodes the TV plaza information signal as well as the broadcast signal and transmits the decoded signals to the user's TV; d) a microprocessor which generates a command to control the set top box; and e) a storage device which stores the TV plaza information signal;
 - ii) transmitting to the signal input interface the TV plaza information and the broadcast signal, each independently;
 - iii) transmitting the broadcast signal of the two signals to a user's TV under control of the microprocessor, the broadcast signal being separated from the TV plaza information signal by the action of the DEMUX and decoded by the signal output interface;
 - iv) storing independently of a user's request the TV plaza information signal separated from the broadcast signal by the action of the DEMUX into the storage device, and constructing a TV plaza within the set top box; and,

- v) under control of the microprocessor in response to a user's request to display the previously stored TV plaza information, transmitting the TV plaza information signal to a user's TV through the DEMUX and the signal output interface which decodes the TV plaza information signal.
9. The method as set forth in claim 8, wherein the signal input interface comprises a tuner which receives the TV plaza information signal as well as the broadcast signal and a channel decoder which extracts a user-requested channel from the received broadcast signal under control of a microprocessor.
10. The method as set forth in claim 8, wherein the signal output interface comprises at least one decoder selected from the group consisting of a data decoder, a video decoder and an audio decoder.
11. The method as set forth in claim 8, wherein the TV plaza information signal is a digitally encoded information signal, and the TV plaza information is life information including advertisement information, education information, stock information and weather information.
12. The method as set forth in claim 10, wherein the TV plaza information signal is a composite signal selected from the group consisting of a data signal, a video signal and an audio signal, and the DEMUX separates the composite signal and transmits the separated signals to the corresponding decoders.
13. The method as set forth in claim 8, wherein the set top box further comprises a cryptographic module and the method further comprises a step of ordering an article to be purchased with the cryptographic module.

14. The method as set forth in claim 8, wherein the set top box further comprises a software module and the method further comprises a step of sending a return path message to a server managed by a TV plaza operator, when the TV plaza information is safely received and stored into the storage device with the software module.